CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO.

FOR
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT
ALPINE AND AMADOR COUNTIES

This Monitoring and Reporting Program (MRP) presents requirements for monitoring of wastewater influent, effluent, wastewater disposal areas (i.e., leachfields), groundwater, sludge, and water supply. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. Specific sample station locations shall be approved by Regional Board staff prior to implementation of sampling activities.

All wastewater samples shall be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field testing instruments (such as those used to test pH and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. Instruments are serviced and calibrated per manufacturer's recommendations; and
3. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT MONITORING

Influent samples shall be collected at the same frequency and at approximately the same time as effluent samples and should be representative of the influent at the headworks prior to treatment. Influent monitoring shall include, at a minimum the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow[1]	gpd	Continuous	Daily	Monthly
BOD[2]	mg/l	Grab	Monthly	Monthly

[1] Influent flows shall be measured with a meter beginning on 1 December 2007.
[2] 5-day biochemical oxygen demand.

EMERGENCY STORAGE BASIN MONITORING

Monitoring of freeboard in the emergency storage basin shall be conducted on a daily basis when the emergency storage basin is in use. Results of daily freeboard monitoring shall be provided in the monthly monitoring reports. If the emergency storage basin was not used during the month, the monthly monitoring report shall state so.

EFFLUENT MONITORING

Effluent samples shall be collected downstream from the last connection through which wastes can be discharged to the leachfields. At a minimum, effluent monitoring shall consist of the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Flow to leachfields	gpd	Meter	Daily	Monthly
Flows to each leachfield	gpd	Calculated	Weekly	Monthly
BOD[2]	mg/L	Grab	Weekly	Monthly
pH	Standard Units	Grab	Weekly	Monthly
Total Coliform Organisms	MPN[3]/100 ml	Grab	Weekly	Monthly
Total Phosphorous	mg/L	Grab	Monthly	Monthly
Total Nitrate as N	mg/L	Grab	Monthly	Monthly
TKN as N	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Standard Minerals [4]	mg/L	Grab	Annually	Annually
Trihalomethanes[5]	ug/L	Grab	Annually	Annually

[1] Include leachfield number and flow
[2] 5-day Biochemical Oxygen Demand
[3] Most Probable Number
[4] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.
[5] Method 8020 or equivalent; to include bromoform, bromodichloromethane, chloroform, and dibromochloromethane and detection limits of 0.5 ug/L or less.

WASTEWATER DISPOSAL AREA MONITORING

The Discharger shall conduct a visual inspection of the wastewater disposal areas (leachfields) on a **weekly basis**. Results shall be recorded and submitted with the monthly monitoring report. Photocopies of entries into an operator's log are acceptable. Evidence of surfacing wastewater, erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms and total dissolved solids. In addition to the visual inspections, monitoring of the leachfields shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Application Rate[1]	gal/acre•day	Calculated	Monthly	Monthly
Leachfield Monitoring Port Inspection[2]	Inches	Measurement	Weekly	Monthly

[1] The application rate for each leachfield.
[2] The Discharger shall measure and record the distance from the surface of the liquid in each monitoring port to the surface of the ground in the active lateral(s). In addition, the Discharger shall record when leachfields are switched.

GROUNDWATER MONITORING

This sampling program is effective with the 4th quarter 2007. Prior to sampling, groundwater elevations shall be measured and the wells shall be purged at least three well volumes until pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. Samples shall be collected using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency[4]
Groundwater Elevation[1]	0.01 Feet	Measurement	Quarterly
Depth to Groundwater	0.01 Feet	Calculated	Quarterly
Gradient	Feet/Feet	Calculated	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly
Total Coliform Organisms[2]	MPN/100ml	Grab	Quarterly
pH	S.U.	Grab	Quarterly
Total Dissolved Solids	mg/l	Grab	Quarterly
Nitrates as Nitrogen	mg/l	Grab	Quarterly
Total Kjeldahl nitrogen	mg/l	Grab	Quarterly
Standard Minerals[3]	mg/l	Grab	Annually
Total Trihalomethanes[5]	ug/L	Grab	Annually
Metals [6]	mg/l	Grab	Annually

1 Groundwater elevation shall be based on depth-to-water using a surveyed measuring point elevation on the well and a surveyed reference elevation.

2 Using a minimum of 15 tubes or three dilutions.

3 Standard Minerals shall include, at a minimum, the following elements and compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

4 Beginning 4th Quarter 2007.

5 EPA Method 8020 or equivalent.

6 At a minimum, the following metals shall be included: arsenic, copper, lead, iron, manganese, nickel, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

BIOSOLIDS MONITORING

The Discharger shall keep records regarding the quantity of biosolids generated by the treatment processes; any sampling and analytical data; the quantity of biosolids stored on site; and the quantity removed for disposal. The records shall also indicate that steps taken to reduce odor and other nuisance conditions. Records shall be stored onsite and available for review during inspections.

If biosolids are transported off-site for disposal, then the Discharger shall submit records identifying the hauling company, the amount of biosolids transported, the date removed from the facility, the location of disposal, and copies of all analytical data required by the entity

accepting the waste.

All records shall be submitted as part of the Annual Monitoring Report.

WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Water supply monitoring shall include at least the following for each water source used during the previous year. As an alternative to annual water supply monitoring, the Discharger may submit results of the most current DHS water supply monitoring data.

Constituents	Units	Sampling Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Annually	Annually
Total Nitrogen as N	mg/L	Annually	Annually
pH	pH units	Annually	Annually
Standard Minerals [1]	mg/L	Annually	Annually

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent, effluent, emergency storage basin, absorption bed, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). At a minimum, the reports shall include:

1. Results of the influent, effluent, and absorption bed monitoring;
2. Copies of inspection logs;
3. A comparison of the monitoring data to the discharge specifications and an explanation of any violation of those requirements;
4. If requested by staff, copies of laboratory analytical report(s); and

5. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Report

Beginning with the fourth quarter 2007, the Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater monitoring;

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;

3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);

5. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;

6. Summary data tables of historical and current water table elevations and analytical results;

7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and

8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly

schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular December monitoring report for the last sampling event of the year;

2. If requested by staff, tabular and graphical summaries of all data collected during the year;

3. An evaluation of the performance of the domestic wastewater treatment system the groundwater quality beneath the wastewater treatment facility;

4. Summary of information on the disposal of biosolids as described in the "Biosolids Monitoring" section;

5. A discussion of whether the Discharger anticipates removing biosolids in the coming year, and if so, the anticipated schedule for cleaning, drying, and disposal;

6. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;

7. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;

8. A description of any additional measures taken to reduce nitrogen concentrations in effluent.

9. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with Title 23, CCR, Division 3, Chapter 26.

10. The results from annual monitoring of the effluent, groundwater, and water supply;

11. A forecast of influent flows, as described in Standard Provision No. E.4;

12. A statement of when the O&M Manual was last reviewed for adequacy, and a description of any changes made during the year;

13. Copies of equipment maintenance and calibration records (including influent flow meter), as described in Standard Provision No. C.4; and

14. A discussion of the following:

    a. Compliance with the interim effluent performance limits for salinity and nitrogen as specified in the Effluent Limitations of the WDRs;

    b. Salinity and nitrogen reduction efforts implemented in accordance the approved workplans;

c. Other best practical treatment and control measures implemented pursuant to any approved BPTC Workplan (if required by the Executive Officer); and

d. Based on monitoring data, an evaluation of the salinity and nitrogen reduction and/or BPTC measures that were implemented.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

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(Date)

JSK/WSW: 23 Aug 07